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SIERRA EDUCATIONAL NEWS



PORTOLA NUMBER

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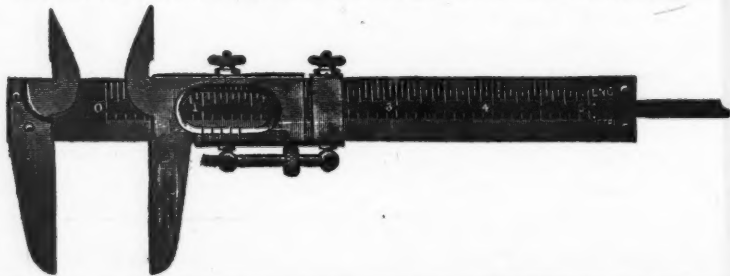
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SIERRA EDUCATIONAL NEWS

AND BOOK REVIEW

Vol. V.

OCTOBER, 1909

No. 9.

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L. E. ARMSTRONG Editor and Manager

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Editorial Comment

L. E. ARMSTRONG

PLAY AND PLAYGROUNDS

In view of the increased attention to health and development work in our schools, we believe that the psychological study, "Why Children Play, will prove interesting to our readers. For the vital relation between health and play is being realized as never before. While there is much of theoretic and purely pedagogic interest in the paper, the practical bearing on the question of gymnastics in our schools should commend close attention. If the author's conclusions are sound, gymnastics must give way to natural, spontaneous play.

There can be little doubt that the trend is in the direction of play and playgrounds. Nearly two hundred cities in this country, containing more than five thousand inhabitants each, are maintaining public playgrounds. And a very significant sidelight on this question is the recent publication of the *Proceedings of the Playground Association of America*. This volume contains a report of the committee on a Normal Course in Play. In this remarkable report a systematic plan for training playground directors is fully developed. We are truly an adaptable people. We believe that in a short time the play of our children will be as carefully surprised as their work. Play of the right sort is essential to a proper physical and moral development. Carefully trained, sympathetic men and women will lead our children to form proper habits of play. May the day be hastened, especially for our city children.

A VALUABLE PAPER

We would commend a careful reading of an article, in this number by Principal Lewis B. Avery, of the San Jose High School. We refer to "Purpose and Organization of Physics Teaching in Secondary Schools." This paper, first published in *School Science and Mathematics*, has attracted attention throughout the country.

At a recent meeting in San Francisco of the Scholia Club (September 18th) this paper was presented by Principal Avery and discussed by the members. Some of the opinions of Professor Lewis, head of the physics department at the University of California, are significant of a new viewpoint in the teaching of physics. Professor Lewis recommended abolishing all quantitative work in high school physics, and recommended that nothing be taught in an elementary course in physics which can not be exemplified with apparatus prepared by the teacher.

The paper and the discussion both pointed clearly to a lack of general science knowledge on the part of our pupils. We have been making the courses two highly specialized and technical, thereby wasting time and energy because the students have not had a course in general science.

AN INTERESTING ARTICLE

We would call the careful attention of our readers to the reply of Dr. Burk to an editorial (A Puzzling Course) in our September number. Dr. Burk's reply is somewhat lengthy, but it is worth reading through. When Dr. Burk asked for space to answer the editorial, we promptly placed six pages at his disposal. While he has overrun the allotment considerably, we feel that if a man needs eight pages for his vindication he should have them.

The editor confesses to a great deal of surprise at this remarkable response to the editorial. In view of Dr. Burk's charges as to "wilful misrepresentations of my personal integrity," we would commend a re-reading of the editorial to Dr. Burk and to all others who may be interested. The editorial contains no reflections upon Dr. Burk's integrity, unless judgment be considered synonymous with integrity. For in the editorial we said: "Dr. Burk is entitled to his opinion, and we believe that he has arrived at it honestly. * * * Dr. Burk's pref-

erence for the Aldine Readers may be well founded." We declined to enter into a discussion of the texts themselves in these words: "This editorial attempts no discussion as to the respective merits of the readers in question." We found no fault with Dr. Burk for preferring the Aldine Readers. Nor did we make any criticism of his proposed plan for testing the several series of readers.

But we did find fault with Dr. Burk's course at Yosemite in showing a public preference for the Aldine Readers, while calling upon the superintendents for a fair and impartial test. For Dr. Burk's words and actions were such as to prejudice the very judgment he was calling for. And this same criticism must rest in still greater degree upon his article in this number for the same reason. By publicly condemning the Baker and Carpenter Readers and proclaiming himself an adherent of the Aldine, he certainly prejudices the judgment of his readers against the Baker and Carpenter and in favor of the Aldine, and thereby prevents (so far as the influence of his personal opinion is concerned) the impartiality of the test which he suggests.

No, this is not a matter of integrity. Nor should it be a personal question in any way. It is a question of judgment. It seems plain that Dr. Burk has blundered—a blunder of the head—and, in his reply, he clearly misses the point at issue. Questions of judgment and taste are difficult of debate because they depend so largely upon subjective standards. For instance, Dr. Burk's reference to an article of his own in the *Western Journal* for October as "a very admirable article," does not reflect upon his integrity, whatever one may feel as to the delicacy and good taste of such a reference.

It seems unnecessary to answer Dr. Burk's charge of misrepresentation. His admissions in his reply would seem to be a sufficient answer. But in any event we are unwilling to use the journal to discuss the editor's veracity, for the reason that when a question becomes purely personal it loses all educational significance. So, without comment, we pass the question of misrepresentation to the calm judgment of the school people of the State.

There is one point in Dr. Burk's reply that deserves consideration because it has grave significance. It is a reflection upon the firm judgment of the school people of the State. He winds up his diatribe on

"the book-agents' heart disease" with the recommendation that we strive as school people to reach the point where "we can look at a text squarely and until we can see a child's and not a book-agent's face in the context." The editor believes that this vantage point of mental and moral sanity suggested by Dr. Burk was reached by the schoolmen and women of California long ago. Dr. Burk's gratuitous recommendation carries an assumption that is offensive. For the assumption of weakness on the part of the other fellow, and of superior virtue on our own, is always offensive to right-minded, clear-thinking citizens.

A LEGISLATIVE BLUNDER

Our last Legislature made an innocent blunder which may have serious results. In prescribing requirements for primary elections, the word "elector" was used in the bill. This part of the primary election law was copied nearly verbatim from one of the statutes of Colorado. No one seemed to catch the significance of the fact that while women are electors in Colorado, they are not electors in California. The bill passed both houses and was signed by the governor before this important distinction dawned upon any one.

A strict construction of the law would bar women from becoming candidates for county superintendencies. Such an unjust and oppressive result was not foreseen by any one when the law was passed. It was clearly an inadvertence. In so far as the question of intent has a bearing on the interpretation of a law, the depositions of the members of the Legislature could easily be secured. In the face of such a palpable error, it would seem that there should be some prompt method of relief. While the next Legislature would undoubtedly repair this blunder, some means of relief must soon be sought to prevent a grave injustice next year.

Bearing on this question the following resolution was passed at a meeting of the Board of Directors of the California Teachers' Association held in San Francisco on October 9th: "Resolved, that the Board of Directors of the California Teachers' Association believes that the restrictions which the present primary election law seems to place upon

women candidates should be removed, either by court interpretation or by revision of the law, and that we hereby express our approval of and pledge our support to such efforts as are undertaken either for one or the other or both. We do this because of our recognition of the efficiency of many of the women county superintendents who have served and are now serving in this capacity."

A FIGHT FOR EDUCATION

The recent complete victory of the educational forces of Los Angeles over a strong political opposition, backed by the leading daily of the southern city, will be hailed with delight by lovers of good schools everywhere. The fight has been long and bitter, involving several personal attacks upon and gross misrepresentation of the policies of the city superintendent of schools, Dr. E. C. Moore. Hand in hand with these attacks and misrepresentations went a policy of determined obstruction.

After bonds for school purposes were carried last January by a vote of four to one, this powerful opposition brought suit to tie up the bonds. This was done in the face of a great public need and with the certainty that the courts would sustain the legality of the bonds. When, after several months, the foreseen happened and the court fully sustained the Board of Education, the opposition served notice of an appeal.

Then at last public sentiment became aroused. Hundreds of children were being turned away from the schools for lack of accommodations. The plan of the opponents of the schools to wreck the school system by captious criticism and by preventing the sale of the authorized bonds aroused a storm of protest. Indignation meetings were held, and a great parade of school children brought the matter home to the hearts of the people. An incensed public sentiment forced the withdrawal of all technical objections to the issuance of the bonds, and in a short time the public-spirited citizens of the southern metropolis floated the entire issue of \$720,000.

We take this opportunity to commend Dr. Moore for his courageous, high-minded course in the great conflict just closed. The final success

attendant upon his firm stand for right school conditions will encourage good citizens everywhere. And especially will it put renewed courage and vigor into the efforts of all schoolmen and women who are facing similar problems. Good for Dr. Moore! We congratulate Los Angeles on having a superintendent of schools who has backbone.

WE THANK YOU

To the many friends of education who have sent in congratulatory messages on the Yosemite Convention Number, we desire at this time to express our sincere thanks. Your appreciation is very gratifying indeed. Had time permitted we should have been glad to write a personal acknowledgment in each case. We trust that our failure to do so will not convey the impression that these messages of commendation are not sincerely appreciated.

We have yielded to the temptation of selecting a few of these letters for publication—enough to make one page. We regret that space and other considerations forbid the publication of all of them. In sending the chosen few forth it is with the hope that the old lady's epigram is not offensively applicable: "To be just right, soft soap must not have too much lye in it."

RECOMPENSE

JUSTICE HENRY A. MELVIN

If God should plunge me in perpetual gloom,
By taking from my eyes the boon of sight,
I would not rail against His word of doom,
Nor curse the solemn hours of endless night.
For love would come attendant at my call,
And whisper of thy graces rare and bright,
And limn thy face upon my dungeon's wall,
In perfect lines of every-living light.

The engrossed resolution of respect to Honorable Galen Clark, reproduced in our Yosemite Convention number, was executed by Miss Cora Connor, a student in the California School of Arts and Crafts, Berkeley.

GASPAR DE PORTOLA

J. D. SWEENEY

Red Bluff, California

SOME men are born great, some achieve greatness, and some have greatness thrust upon them." In this latter class Gaspar de Portola surely belongs. For until it was conceived by our San Francisco friends to do him honor he has been known to but a few students of California history as the first governor of Spanish Alta California, and even that honor was rather empty as his services as actual governor were practically nil. The average citizen of the State had probably never seen the name in print until a few short months ago, and even now no doubt wonder what the name means.

In 1603 Viscaino coasted along the shores of this State touching at Point Reyes and Cape Mendocino and discovering Monterey Bay. After going as far north as Blanco in Oregon, he returned to Mexico and endeavored to secure permission to settle at Monterey, but died before he was able to achieve this end. He left very accurate descriptions of the coast and was especially enthusiastic about the beauties of Monterey.

For one hundred and sixty years after the death of Viscaino, Spanish galleons skirted the coast of California on their return from the Philippines, as they took advantage of the westerly winds and the ocean currents that brought them to the coast about Cape Mendocino. The port of San Francisco, meaning the sea within the curve south of Point Reyes and inside the Farallones, was well known to them though it is doubtful if any ever saw or entered the Golden Gate.

English and Dutch privateers had preyed upon the commerce of Spain, robbing her treasure ships, devastating the shores of her colonies, and the grasp of Spain was fast loosening as a long period of disorder and oppression at home had weakened the power of Spain and her zeal and courage had departed from her. The Jesuits were the only Spanish who might have been said to have retained the former zeal of the nation. With heroic perseverance these friars had been working since 1697 in Lower California. Progress was slow as the land was unproductive, the climate was not the best, and the natives were a very inferior class. But Catholic Europe became jealous of these priests and nation after nation banished them. At last Carlos, who was the ablest Spanish king for

years, ordered their expulsion from his American colonies and the task of enforcing this decree in Lower California fell to Gaspar de Portola.

Portola was born, as far as can be ascertained, in 1723, in Catalonia, of obscure parentage. At the age of eleven he entered the army as an ensign, holding that position for eight years when he was appointed a lieutenant. For over twenty years he held this rank and was then promoted to a captaincy and in 1767 was sent to be governor of Lower California. By the following year he succeeded in sending the few Jesuits to Mexico, whence they were sent to Rome. The mission work of the peninsula was then transferred to the Franciscans with Father Serra as one of the leaders. Within a short time Governor General Galvez, of Mexico, decided to colonize Alta California in order to prevent its falling into the hands of other nations, and Father Serra was chosen as the one best fitted to head the work of evangelizing the natives and Father Palou tells us that Portola volunteered to go as the leader of the military.

Soon we find them on the road for San Diego and Monterey where posts were to be established. Ships had been sent ahead with food and implements, while cattle and horses were driven by the land expeditions under Serra and Portola. This was in the spring of 1769 and the journey was slow and accomplished after great hardships. Some of the native helpers became sick and had to be carried, several died, thus making the burden greater for the others, and not a few deserted. On July 1st, Serra and Portola reached San Diego where the ships had already been some weeks, the first having arrived early in April. The organization of a mission was at once begun and within a few days, Portola in obedience to his instruction started to find Monterey. His company was made up of over sixty including Father Crespi, and they took with them rations for six months, in case the ships which were ordered ahead should fail to reach the port. The journey was accomplished without great difficulty and about October 1st the bay of Monterey was reached. They failed to recognize the broad open arm of the sea as that described by Viscaino, whose record was their guide. Accordingly the journey was continued northward for some days. By this time many of the company had become sick and had to be carried on litters so that the journey was very slow.

At last, near the end of October, the company reached a point probably near Half Moon Bay. Here we have the record of Miguel Costano, the civil engineer of the party: "We descried from the crest of a hill a very great bay, from the northwest side of it a point ran out considerably to sea. To the south-southeast of said point were seen seven small islands, tall and white. On the inside of the bay were some white bluffs. There was also to the north another great bluff. At sight of these landmarks, I consulted a book by one Cabrera (this book was published in 1734) who was of the ship of the Philippines. As these landmarks agreed with the notices of the book, it seemed beyond doubt that we had before us the Port of San Francisco, in which, says Cebrera, the vessel San Augutin was lost in 1595." This was not the bay of San Francisco, but the arm outside the Gate as noted above. —

Portola was too ill to leave camp and sent ~~Artega~~ Ortega, his lieutenant, to try to reach Point Reyes. With a few men Ortega went forward to find his progress stopped by a strait, and climbing to a hilltop, he beheld to the east and southeast a vast arm of the sea—the now famed San Francisco Bay. Thus to Ortega belongs the honor, as far as is recorded, of being the first white man to look upon the waters of San Francisco Bay. For we can not positively state whether Portola himself ever saw the bay or not. He evidently placed very little importance upon his discovery. Provisions being low and chances for relief being slim, they returned south. At Monterey they set up crosses stating that they had been unable to locate the Bay of Monterey, and disheartened, Portola started for San Diego with the determination to return to Mexico. San Diego was reached the following January. Portola announced that he would return home, but Serra, who was not satisfied that a thorough search had been made for Monterey begged that the departure be put off. At last he consented to leave San Diego if the San Antonio, which had gone after supplies, did not reach them by a certain date. Secretly he determined to take ship and start for Monterey when San Diego was abandoned. On the day before the time set for leaving, the San Antonio passed San Diego on the way to Monterey, but was compelled through accident to return to San Diego.

The arrival of the San Antonio convinced Portola that his Governor was in earnest in his determination to settle California and probably more

to keep in with the authorities than anything else, he made haste to renew search for Monterey. On the second expedition, Father Serra went along and when the Peninsula of Pines was reached and the crosses set up the summer before were found, they had no difficulty in distinguishing the place as that described by Viscaïno. In fact Portola had camped upon the present site of Monterey City and had put up one of his crosses near the mouth of the Carmel River. On June 3, 1770, the dedicatory services were held and Monterey Mission established. Portola sent a messenger at once to the City of Mexico with the glad news, and in a few days he too, set out for the home land, and never returned to California. His after life is not well known to Californians. In 1776, we find him appointed ruler of the City of Pueblo and a few years later he went back to Spain and dropped out of sight.

Such is the story of the exploits of the first governor of our State, the reputed discoverer of San Francisco Bay, the man to whom honor is coming after nearly a century and a half.

THE LITTLE BOY'S BABY PRAYER

Dear God, I need You awful bad;

I don't know what to do;

My papa's cross, my mamma's sick;

I hain't no fren' but You.

Them keerless angels went an' brung

'Stid of the boy I ast,

A weenchy, teenchy baby girl.

I don't see how they dast!

Say, God, I wish 't You'd take her back.

She's jest as good as new;

Won't no one know she's secon'-hand,

But 'ceptin' me an' You;

An' pick a boy, dear God, Yourself,

The nicest in Yer fold;

But please don't choose him quite so young,

I'd like him five years old.

S. M. TALBOT, in *Lippincott's*.

WHY CHILDREN PLAY
WILL GRANT CHAMBERS
State Normal School, Greeley, Colorado

WHY do children play? Schiller and Spencer explain play as an excess of energy in the playing individual. The energy not used up in the necessary activities of the organism is discharged into the muscles and play is the result. Groos regards play as the functioning of instincts for which the organism has not, as yet, a serious need. For him the significance of play lies in its prospective reference; it is the development and practice of abilities for future use. Hall, as is well known, objects to this prospective emphasis and insists that play be explained in terms of its past. It is the functioning in the individual of racial activities, many of which have long since ceased to be directly useful. The significance of play lies not in what it is to become, but in what it has been. Its satisfaction is historic rather than prophetic. Less well known philosophers have offered other explanations which, at best, are but variations of those quoted.

Attempts have been made to explain play, also, by contrasting it with work. Thus Dewey: in play the activity is its own end, in work an aim is sought beyond the activity; play does not distinguish between the process and its product, work makes such a distinction and emphasizes the product. Others maintain that play is generalized activity while work is always specialized. And our own President, Dr. Johnson, has wisely suggested that perhaps the most fundamental distinction between play and work is the difference between the functioning of instinct and the functioning of habit.

But it is not from the philosophers that I have sought an answer to this question of "why children play." If by a cause we mean that which is invariably associated, in the mind of the experienter, with the occurrence of a given effect, it would seem the part of wisdom to inquire of the players themselves why they play. Though the principle is not commonly recognized in educational practice, my studies of childhood have convinced me that the children themselves, in most cases at least, can give more satisfactory answers, for educational purposes, to questions concerning themselves, than the profoundest philosopher who fails to consult them.

To the children, therefore, I have turned for an answer. The public school pupils of a Pennsylvania city were asked, "What game do

you like to play best and why?" Written answers were received from 2,481 children ranging in age from six to eighteen years, from 1,212 boys and 1,269 girls. A total of 280 different games were named by the children of all ages. The boys named 162 different games, the largest variety, 53, being named at age ten; the girls chose 186 different games, the largest group, 52, coming at age eight. The girls named a greater variety of games than the boys at every age between eight and sixteen inclusive, averaging 10 per cent more games per capita; the boys tend, on the whole, to name fewer games with increasing age, while the girls tend to name more.

A brief summary of the facts discovered in the classification of the games named by the children as their favorites shows: Outdoor games were preferred by $55\frac{1}{2}$ per cent of the children and indoor games by 22 per cent. The former tendency increases constantly after eight, while the latter diminishes to the thirteenth year, and then increases. Games which are necessarily social, that is, requiring the presence of other children, are named by $89\frac{1}{2}$ per cent of our contributors, while but 2 per cent gave evidence of preferring solitude, all being below the age of fourteen, and diminishing regularly in number after eight. The curve of social games begins with 75 per cent at age six and runs about 90 per cent after ten, reaching 100 per cent at age sixteen.

Sixty-one per cent like games involving physical activity and only $10\frac{1}{2}$ per cent prefer those which are chiefly mental, and the interesting though not altogether complimentary fact about this last antithesis is that while preference for physical exercise gradually increases from 40 per cent at 7 to 81 per cent at 17, mental recreations diminish in popularity from $13\frac{1}{2}$ per cent at 8 and 9 to $5\frac{1}{2}$ per cent at 14, increasing, however, during the next two years to 18 per cent and again falling off. The relative popularity of games requiring motor skill is indicated by the votes of 41 per cent of the writers. This is an increasing popularity, the curve rising from 27 per cent at age nine, its lowest point, by a regular ascent to 72 per cent at age seventeen and eighteen. The prominence of co-operative games at an early age is one of the surprises of this study. We have been encouraged by earlier studies to expect an extreme individualism in the games of the smaller children and a progressive development of co-operation in the later years. In the

present study 70 per cent of the six-year-olds choose games which require co-operation, and the curve rises with only two slight depressions to 89 per cent at eleven, 97 per cent at fourteen, and 100 per cent at sixteen.

Another surprise is the small proportion of rhythmic games mentioned. Only 4 boys and 58 girls, about $2\frac{1}{2}$ per cent of the children, name games which are necessarily rhythmic, and 5-6 of these are below age ten. Imitation and construction have but small places in the preferences of these children: less than half of one per cent name a constructive activity, and only 3 per cent mention games which are consciously imitative.

Coming now to the reasons given by these children for their preferences, we approach more directly the answer to the question, "Why do children play?" First, we discover that $11\frac{1}{2}$ per cent of them, found chiefly in the earliest years, attempt no answer. They can't tell why they play. About 12 per cent, chiefly of the earlier ages, are satisfied with the very vague reason, "It is a nice game" or "It is a good game," or "I like it best." Another group of almost 15 per cent name some characteristic of the game, as "Blind man's buff because they tie up your eyes." The first associated idea which comes to mind is given as the justification for playing the game. This tendency is strongest at ages ten, eleven and twelve. The next largest group play for the activity involved; 17 per cent play because "there is running in it" or because "it is good exercise." This tendency culminates at age sixteen with 38 per cent. And the largest group of all, including nearly 21 per cent of the children, play because "it is fun." To say that a game is "good fun" is to them an all-sufficient reason. This is a very popular reason from the ninth to the fourteenth year inclusive. As this "fun" curve drops after fourteen, another, closely related but representing a higher degree of discrimination, rises to take its place. This is the curve representing the answers, "It is interesting" and "It is exciting." From the fourteenth to the eighteenth year this group grows from 4 per cent to $28\frac{1}{2}$ per cent. Finally, there are numerous scattering reasons, such as companionship, no running, quiet, gaining information, rivalry, easy to play, pecuniary gain, developing muscle, etc., given by from 10 per cent to 12 per cent of the children.

The principal sex differences brought out by this study are the following: Girls choose a larger variety of games than boys. Boys predominate in games involving physical exercise, in those requiring motor skill, in outdoor games, and in solitary games. Girls lead in imitative games, in indoor games, in games involving mental effort, and in rhythmic games. In social games and in co-operative games there is no significant difference.

Now, if we bring this array of facts into relation to the various philosophies of play quoted in the beginning, what do we discover? We are driven, I think, to an acknowledgment that each of those theories is correct if it be regarded as a statement of a single point of view rather than as a comprehensive philosophy. And if we are further persuaded of the necessity of a restatement of the theory of play which shall comprehend, but not necessarily in a single formula, all the partial statements which are justified by the facts. With this aim in view, then, let us briefly review these statements in the light of the discovered facts.

The surplus energy theory of Schiller and Spencer received no *direct* support from the answers of these children, though there are certain implications in favor of it. The games chosen are chiefly those which require the expenditure of a great deal of energy, which must be in excess of that required for the vital processes, since these processes combine without interruption. That the expenditure of energy in this form gives satisfaction is indicated by the fact that 1-5 of the boys and 1-6 of the girls give as their reason for playing their favorite game that there is running in it, or that it is good exercise. In addition to the implications in these statements we have the commonly recognized arguments that sick children have little inclination toward play, and that the period of greatest playfulness in life is also the time when organic conditions are most favorable to the protection of the surplus energy. It seems fair to say, then, that whether the presence of surplus energy be considered the inciting stimulus of play or not, it is certainly the means by which it is carried on.

That play is the functioning of nascent instincts, not yet, if ever to be, demanded for serious business, there is little room to doubt. This study and others have shown that play interests closely parallel the series of nascent instincts which has been worked out by the genetic

psychologists. Not to mention specific games, the present study shows the culminations of interest in certain types of games to assume the following order: (1) in the earliest years, indoor games, rhythmic games, imitative games, solitary games; (2) about the early teens games of vigorous physical activity, outdoor games; (3) in the later teens, social games, co-operative games, games requiring motor skill, games chiefly intellectual. The relation of the games of these three periods to the nascency of instinct requires no elaboration.

But more convincing still is the evidence from the mental concomitants of play. The reasons which children give for their choice of games are indicative of strong impulse, intense feeling, and vivid but fleeting imagery; these are the psychic earmarks of instinctive action.

When we come to the issue between Groos and Hall as to whether play shall be characterized as the exercise of abilities for future use, or the practice of racial endowments for present satisfaction, this study lends its support to the latter. To be sure, there are evidences of differentiations of play which correspond to later differences of vocation; girls choose more rhythmic, indoor, imitation and purely mental games than boys; boys name more outdoor, muscular, running games and those which require motor skill. But this does not mean so much that future work determines the nature of present play, as that present play so satisfies present needs as to make possible certain kinds of future action—be it work or play. On the other hand our evidence is almost wholly negative as to any conscious relation in the minds of the children, between present play and future utilitarian activity. Note this contrast in their reasons which indicate absorption in the game itself as opposed to those which look beyond the game: the groups headed "no reason," names some characteristic of the game, "there's running in it," "it's good exercise," "there's no running in it," "it's a quiet game," "it's a nice or good game," "it's fun," "it's interesting or exciting," and "I like it best," aggregate 33 per cent; while all the groups of reasons which could possibly be construed as having a future or utilitarian aim, viz., "a source of knowledge," "it requires skill or thought," "possession or gain," "it's healthy or develops muscle," "morally good," and "other utilitarian reasons" aggregate but 3 per cent. So far as the child knows his own mind,

future utility has little to do with present play. One four-tenths of one per cent of the children name a game involving construction.

As for the relations between play and work, the conclusions already presented suggest that, whether the opposite characteristics be true of work or not, the classified play activities of these children seldom point to an end beyond the activities, that these play activities are diffuse and general rather than specialized, especially among the smaller children, and that play involves the functioning of native instinct rather than of acquired habits.

There is little or no evidence in the natural plays of children of conflicting impulses which demand voluntary attention. It is the introduction of voluntary attention which transforms play into work. In play there may be a highly specialized motor and mental reaction at the center of things, but it is reinforced by the co-operative reaction of every part of the organism. The entire psycho-physical system is involved. In work, a successful outcome implies that all unnecessary movements shall be inhibited, and all irrelevant associations shut out of consciousness; but the motor and mental stream must run in the narrowest possible channel direct to the goal. Play, on the other hand, is most joyous when its movements engage every muscle and its imagery is most varied and facile.

That play remains a much more general type of reaction than directly utilitarian activities, even in the later stages of its development, is easily demonstrated. Functional psychology teaches us that definiteness of one's mental processes is proportionate to the accuracy of his motor reactions. A high degree of specialization on the motor side conditions a high degree of specialization of the mental side. A bungling adjustment can produce naught but a clumsy percept. Now all studies that have been made of children's reasons for doing things show a distinct progress in their conception of "a reason" from year to year. No such marked development appears in the reasons given by children for their choice of games. Even the answers of most of the older children linger in the region of vague feeling or of chance association. I have already stated that more than 83 per cent of the reasons given by the children of this study are of this vague, accidental, or subjective sort, while but 3 per cent are definite and objective. The culminations of the

six main tendencies of the first sort are as follows: age six, no reason; age eight, "It's a nice or good game;" age eleven, "It's fun;" age twelve, some characteristic of the game given as reason; age sixteen, "There's running in it," or "It's good exercise;" age eighteen, "It's interesting or exciting." It is evident that not much progress has been made in the clarification or objectification of these answers in twelve years of school life. I am disposed to believe that the best reason to be given by any one for playing is a statement of general satisfaction.

Objectively, play is the functioning of neuro-muscular systems whose development is of supreme importance in the economy of organic life. In early life these systems are isolated, and often antagonistic to one another—fragments of what, in mature ancestors, were highly complex systems, functioning as important activities in their lives. But these minor fragmentary systems are selected and transmitted, not on account of their past value to the ancestors, but on account of their value to their present bearers. Each new motor co-ordination we develop is built up out of the fragments of old co-ordinations. The old complex motor habits must disintegrate more or less completely before the new complex movements can be built up. Play reveals to the individual the fragments of ancestral adjustments which he has in his possession, for use as components of conduct; and it also serves to bring these components together into such new co-ordinations as are of the greatest present value through processes of selection and fusion. Figuratively speaking, play holds in solution the elements of ancestral activities, and precipitates now one adjustment and now another, according to the needs of the player. Because the play reaction involves all the neuro-muscular systems of the body, it results in the development of a unity, a wholeness, and completeness of co-operation of all parts of the organism which could be accomplished in no other way. It is for these reasons, speaking biologically, that children play.

Subjectively, children play because they enjoy it. I know of no better reason for a boy's playing ball than "it is fun," or for a girl's dressing dolls than "I like it." As the diffused motor reaction of play is the most promising for future efficiency, so the unspecialized pure joyousness or sense of well-being is the best start for mental sanity. Indeed, this heightened emotional tone is to the mental side what the diffused and

energetic motor reaction is to the physical nature; it is the condition for vivid imagery, for rapid and varied associations, thus making all of experience accessible to the needs of the moment. The completeness of co-ordination of the varied movements of the physical side of the play is reflected in the unity and harmony of the vivid and facial imagery on the mental side. Indeed these may properly be regarded as obverse and reverse of the same condition. The heightened sense of well-being, the pure, objectless joy, which gives the consciousness of value to the child's play, is the survival in him of the lapsed percepts and images, of the fears and excitements which accompanied the ancestral activities of which his play is the expression. There is little of educative value in formal gymnastics or any kind of required physical exercise, because the soul is lacking. An hour of spontaneous play is worth a whole course of formal gymnastics, because the needs which play supplies are mental as well as physical.

Play is nature's great educator. It reveals to the child his possibilities for action and puts him in possession of racial experience in its most plastic form, without burdening him with ready made adjustments or obsolete systems of knowledge. He is the architect of his own fortune though he builds his mansion from the ruins of ancestral palaces.

"Oh, you wanted to, yes; and hence you crow
That the Want To within you found its foe
Which wanted you not to want to, and so
You were able to answer always, "No."
So you tell yourself you are pretty fine clay
To have tricked temptation and turned it away;
But wait, my friend, for a different day!
Wait till you want to want to!"

—From "*Impertinent Poems*," by Edmund
Vance Cooke.

A REPLY TO MR. ARMSTRONG

By FREDERIC BURK

AN EDITORIAL in the last number of the SIERRA NEWS sought to cast discredit upon my motives in proposing the plan by which ding texts now before the State Board of Education for adoption should be practically tested by the superintendents and teachers chosen by them, in the schools. In so far as the personal issue is concerned, I feel like saying that if, after my years of work in the schools of California, my reputation as to integrity can not shed such a species of attack, then let it go at that. However, since the plan of testing the texts has been attacked by this digression upon my motives, and as frank publicity is a part of the plan as proposed, I am entirely willing that this publicity should commence at home. I will therefore begin at the beginning.

For the past six months or more the selection of reading texts has been before the State Board. I have made such examination of these texts as is possible without the important one of actual experience; I have read and listened to the reports and discussions of the Readers appointed by the State Board to make such similar examination within the same limitations; I have listened to the arguments by the publishing companies, and have read the chief portions of their briefs; and I have heard and taken part in such discussions as have occurred in the State Board. At two meetings this question of the selection was forced to a vote without final decision. In my judgment the members of the State Board are not yet prepared to vote intelligently, and with the quality of conviction, which the vital importance of this issue to the first grade pupils of the State unquestionably demands. Our Readers are likewise sailing the seas in pedagogic sieves. I am sure, finally, that few of the superintendents and teachers will assert that they are prepared to pass well founded judgments upon the series of reading texts unequivocally most suitable for the varied conditions of the schools of this State. Pedagogic vagaries, rampant in the State Board, are couchant in the schools and the only certain test, as well as the easiest—the test by experience itself—has not been tried.

I went to the first meeting of the Board, held to consider the selection of texts, with a tolerably strong conviction that our experience with the present series (Cyr) justified their readoption. No considerable body of the teaching forces had expressed in a formal way pronounced dis-

satisfaction with the series. Of the others which I had examined up to that time, with any degree of care, none (except possibly the Child Life) showed by internal construction any promise of equality to the series. The Cyr primer has been regarded, with practical universality of judgment of teachers, as the best, or among, the best, by reason of its limited vocabulary with systematic repetition of the words in the succeeding pages. The first reader departed too suddenly from this principle and the fact must be regarded as a very serious defect; and just criticism can be made that the language and ideas of succeeding books were somewhat above the ideas and interest of primary pupils. This marked superiority of the primer and defects of the later books are generally recognized and admitted. The altogether important books of a reading series, from my point of view, are those intended for the first and second school years; and of these, the primer stands distinctly first, for if early progress is stunted the pupil does not catch up in years, if ever. Further, in selecting texts for the entire state, we must concern ourselves particularly with texts suitable for the rural schools under the conditions of which the teacher has eight grades and only time for limited personal attention for the beginners. For city school systems with classes exclusively made up of beginners, with supplementary texts, with specialized teachers of reading, success perhaps may be reached with any text or no text at all. But in these rural schools the text must be as automatic and self-helpful as possible. There is legitimate and general objection to changes in texts upon principle, and unless it is unequivocally demonstrated that some series is very decisively superior to the Cyr it would be better to hold to that which we have and the weaknesses of which we know than adopt a new text the weaknesses of which we must learn. At this meeting of the Board some of the Readers expressed very violent, almost hysterical objections, I might say, to the Cyr series, but principally, if not wholly, on account of the defects already state. The publishers offered to revise the first reader according to any reasonable requirement the Board should make. But when we came to a vote upon an eligible list of the three texts, the Cyr was in some way elided. Parliamentary procedures are sometimes very confusing. The point was raised at this meeting, however, that the principle of a system of a limited vocabulary and of a systematic

repetition of words once introduced, is a vital one. The State Text Book Committee was authorized to have a compilation made to show in how far this principle was followed by the primers and first readers of the various series.

At the next meeting of the Board in June this compilation was reported. It was based upon a tabulation of the words in about the first forty pages of each text representing from 1,300 to 2,100 words respectively. The following table shows the average number of entirely new words introduced in each successive group of 100 words:

| | NEW WORDS |
|---------------------------------|-----------|
| Baker and Carpenter Primer..... | 16.1 |
| Arnold Primer..... | 10.6 |
| Health Primer..... | 9.8 |
| Cyr Primer..... | 5.3 |
| Child Life Primer..... | 4.9 |
| Aldine Primer..... | 2.5 |

The following shows the number of new words introduced in the pages compiled of each primer:

| | TOTAL WORDS | DIFFERENT WORDS |
|-------------------------------|----------------|--------------------|
| Baker and Carpenter Primer... | 1376..... | 221 |
| Arnold Primer..... | 1296..... | 141 |
| Heath Primer..... | 1628..... | 161 |
| Cyr Primer..... | 2061..... | 110 |
| Child Life Primer..... | 2061..... | 102 |
| Aldine Primer..... | 1602..... | 40 |

This compilation shows that upon the standard of comparison with the Cyr, the effectiveness of which we know by experience, the Baker and Carpenter injects three times as many new words in each one hundred as the Cyr and in the first 1376 words of the book 221 different words are introduced as against 110 different words in the first 2061 words of the Cyr. In view of the current estimate that a beginning class will learn no more than one new word per day for the first few months, the proposal that we change from the Cyr to Baker and Carpenter, for any reason which has yet been stated, is one which more than justifies apprehension for the outcome. I have personally made extensive com-

parative compilations to determine other points of the primers and first readers—the amount of repetition of each individual word, lapses in recurrence, the union point of primer and first reader. Space does not permit my giving these results here, but I may briefly say that in practically all these points, the texts we now have, imperfect as they are, are superior to the Baker and Carpenter in about the same ratios as shown in the compilations by the Text Committee. In my personal judgment these requirements of construction in the primer are vital and final. There may be other virtues deducible by pedagogic argument which a primer may possess, but the ratio of introduction of new words, and their repetition is a determining factor especially under the conditions of our rural schools. No other virtues, if there are such, can overcome the fundamental errors of the Baker and Carpenter, just as an egg, no matter how large, how far it may conform to the "culture epoch" theory, or how sweet to look upon, is out of the question if a deceased chick is inside it. The Cyr primer, we know by experience, is upon the extreme limit of practicability in the matter of the size of its vocabulary and the degree of repetition so that any improvement sought by a change must lie in the direction of still greater limitation of the number of different words of the vocabulary, and in the increase of repetition; for these changes would make the book still more self-helpful to pupils. If these laws of construction, as I have accepted them, are false, and the success of the Cyr primer is due to other causes, why then should we not, before adoption, test out in the same experience and varying conditions of our state, these other primers, and if the Baker and Carpenter, which pays slight attention to any system of introduction and repetition of words, proves the most effective, the falsity of the principle will be shown.

So far, then, as a judgment of primers can be reached by examination without test by actual experience, the investigation by the Text Committee unequivocally shows that, of the six primers examined, the Baker and Carpenter stands at the extreme of inferiority; that the Aldine is as much superior to the Cyr, measured by the successful principle of the Cyr, as the Baker and Carpenter falls short of this standard. Do not understand me as asserting that this conclusion is a necessarily final position, for I have little faith in the finality of any views on education

which are not the products of experience, but I do believe this statement exhausts the possibilities of an argumentative decision.

Mr. Armstrong, in his brief commending the Baker and Carpenter series, which he was employed by the publishers to write for submission to the State Board and its Readers, omits all discussion of these vital defects stated. Acting as a bookman he is commendably loyal to his employers in making this omission. But if he were a schoolman, pledged to loyalty to the rights of the schools, he would not be in a position seriously to take offense that I, as one responsible to the school interests, should have openly declared my objection to the texts and repaired his omissions.

I think I have herewith shown my stable grounds for justifying my motive seeking to have these texts tested by the superintendents under the actual conditions of our schools. I am emphatically opposed to any final decision until the texts are thoroughly tested under the conditions of the schools and I shall then vote as a representative in accordance with the judgment of the school people of the State regardless of personal views. The elision of the Cyr is one upon which I should like to know more definitely the general school judgment; if the Cyr is elided and I am forced to vote before the books can be tested, I expect to vote against the Baker and Carpenter, and in favor of the Aldine provided the publishers consent to a few minor changes in mechanical arrangement.

There is another basis for motives in urging the superintendents to test these texts by their own experience and to form their judgments. It is that this problem of text selection can never be upon a sound, safe or permanent basis until the responsibility in the selecting of texts rests, not upon the State Board, or any delegated authority, but upon the entire school body and that the members of the State Board shall be the representatives of the judgments of the school people founded upon experience. This point of view is fully developed in a very admirable article in the *Western Journal* of current issue and I take genuine pleasure in using the columns of this journal to point out a single shining virtue in our sweet sister.

With these two points in my motives I proposed at the Superintendents Convention the plan of testing the texts by them. I did not seek

their concurrence with my views for I did not state my views; nor did I ask their advice, because, until they had tested the texts under the different conditions of schools, they had no advice that I cared to hear. When they shall reach a judgment by experience, whatever it is, it will be my duty to carry it into effect. What I did propose, the official organ of the Teachers' Association avoided reporting either in its account of the convention or in the editorial, to wit, that such superintendents who volunteered should select teachers who should do the testing with *their* own classes and under *their* own local conditions and their own methods of instruction, and from *their* experience to draw *their* own conclusions. Each superintendent will thereby reach a conviction of his own. If it is an honest one he will probably fight for it through thick and thin, and we shall have developed a sense of personal responsibility which is the necessary terra firma of any sound school system. Without it we have only quicksands of "pedagogy."

Coming now to the "more serious question," Mr. Armstrong charges me with introducing a Mr. Brainard of the Newson Company to "many" superintendents and therefore, inferentially, of being in the business of drumming up small trade for suddenly developed intimates in book concerns. In order to state this charge with proper stage settings Mr. Armstrong breaks the ninth commandment five times in sixteen lines by actual count and omits to state the one lone truth in the incident which would have ruined the theory built upon Moses's broken tablets. This omission is that of the plan of testing texts by the superintendents. Obviously these can not be tested unless there are books in the hands of the pupils. These new books must be purchased from the publishing companies and if the tests are to be at all general throughout the State, the publishers can not be expected to furnish these books free. In order to obtain as favorable terms as possible, I consulted the representatives of the two publishing companies concerned and suggested, if possible, they make some concession for the purpose of the tests. One finally agreed that he would allow the books to be sold at reduction offered by introductory prices, and the other said he would consider the matter. So far as the moral issue immanent in the introduction of Mr. Brainard to "many" superintendents, for the specified purpose of enabling their schools to obtain the texts at reduced prices, is concerned, I barefacedly

admit I would have introduced him to the entire convention. I, therefore, only dwell further upon the point of the "many" because Mr. Armstrong's veracity hinges upon this point. I remember that *one* superintendent inquired of me how he could secure copies of the Aldine readers for testing purposes since the books had no agent upon this Coast, and I took him to Mr. Brainard. I also have a hazy notion of some similar incident, but there were not more than two within the limits of my remembrance, as willing as I am that there should have been one hundred. But Mr. Armstrong's "serious matter" requires "many" and two are not many. Probably the better way for Mr. Armstrong to settle this matter is to name the "many." If he can then I will excuse him from making good in the other four instances of handling truth carelessly in these sixteen said lines.

Mr. Armstrong finally embarrasses me by the proffer of a title or so, "judge," "attorney," etc. Thank you, I already have as many titles, entitled and unentitled, as are sufficient to impress those thereby cheaply impossible. Truth as well as modesty compels me to decline to pose as "judge," by virtue of enforced ex-officio membership in the State Board of Education. If I must be classified and labeled, call me a representative, and for this reason, to wit: In the various adoptions of texts by the State Board I have on but two occasions, at most, voted for texts which met my personal judgment as the best for adoption, but I have consistently voted for the text which so far as I could learn was the choice of the school people of the State. If I have a judgment, final or partial, which pertains to school affairs for which I am responsible, I shall battle for it as an attorney among other attorneys, using all the vigor I possess, until I change the judgment or am called upon to lay aside the attorneyship, while I serve the judgment of the school people as one of its representatives in the State Board; I will then cast my vote as this school judgment directs, regardless of my own personal judgments, just as I have always done since the time of the first adoption when I finally voted for the wretched Advanced McMaster History, personally believing, as the events subsequently proved, that it was far too difficult for our elementary pupils. I think I have now laid bare the "Puzzling Course" as fully, explicitly and as candidly as anyone wants me to do—possibly a trifle more. But if there is anything more

of public interest inside my skull sufficient to call for inquiry from the authorities that be of the State Teachers' Association organ, I trust that the necessity of coming for it armed with a sand bag, innuendo, and the absence of the ninth commandment may be removed.

I have this much to say in conclusion. It has grown to be one of the established rights of American citizens, charged with high or low crimes and misdemeanors, to prove their innocence by abusing the prosecution. I have manfully battled throughout this reply with the temptation to use this inalienable civic right and I am proud of my degree of patience. Permit, however, this digression, as a moral: Schoolmen, upright and sincere in general matters of their calling, as, for example, Mr. Armstrong has been, who try to be hail fellows well met with the bookmen and to enter upon relations of social intimacy with them, irresistibly acquire the bookagents' heart. Their point of view upon the selection of texts becomes so imbued with the booksellers' feelings and interests that they lose, more or less completely, the sense of their own responsibility to the school side of the question. Continually brought in contact with the personalities of the bookmen, the schoolman's human sympathies go out to his friends' hopes, fears, plans of campaign. His horizon becomes limited to the "campaign" and looking through these glasses he sees all moves in the colors of the "campaigners." How general has become this attitude among schoolmen is illustrated by the questions asked when any adoption is made, as, "Which house got it?" or "I feel sorry for ———, he worked hard for it." If when we buy hats we thought chiefly about the hatter's end of the transaction, his rights, his children's mouths, the competition of other mad or wicked hatters seeking our trade, our head gear would be quite different from what it is. So this habit of selecting texts for the children of the State by feeling the bookmen's pulse and temperature is fast disqualifying many schoolmen from ability to look at any of their duties, involving the interests of bookmen, fairly in the face. The bookagent heart is, in principle, not unlike the tobacco heart of which Good Brother Graham spoke so feelingly at Yosemite. When we see such sinful saints as Brother Linscott defending the practices of the dudeen so eloquently, we realize what a few years of social intimacy with a dudeen will do for an otherwise pillar of piety. So it is with the bookagent heart

disease. Mr. Armstrong's editorial naively reveals this unconscious reincarnation of onetime schoolman—at least I am willing to take that view of it up to his fractures of the ninth commandment. Then he passes into the second stage of the disease. He opines I should be a judge with wig and ermine, and that I fulfil my whole duty if I simply stand to see "fair" play in the private scramble of the bookmen for their "rights," to see that no one of the lot gets in a foul blow upon a competitor or steals his neighbors' plums—bosh! Let us get out of this atmosphere and back into the atmosphere of our school rooms where we belong—here are also questions of campaigns, of fair play, of justice, of duty—but they are of another kind. The antidote for the book-agent heart trouble is that we proceed to interest ourselves in the aspects of our own business, in the construction of tests of texts from the stand-points of efficiency of our schools, and thus get our minds off the "campaign;" that we harrow these school questions by good-natured argument until we can look at a text squarely and until we can see a child's and not a bookagent's face in the context.

And finally let me say frankly to the gentleman who could more consistently have penned this gratuitous attack upon my personal integrity, published by the courtesies of the official organ of the State Teachers' Association, you will not prevent this testing of the texts, by this or similar attacks. You may, by this process, frighten some of the schoolmen—but not all of them. You may succeed in convincing some of the good school people that those who oppose your "campaign" do so from personal motives—but not all of them. You may succeed in keeping a large number in their original state of indifference—but not all. You may induce some to attempt a hollow sneer—but not all. You may indeed succeed in having adopted the text of the company whose turn "by rights" it now is. But this adoption will be made with the facts laid out upon the table of publicity and the right and the wrong will be distinct and clear. It will be harder for the thing to be done a second time. It even may be possible to do it a third time—but not forever. And I would advise you to lay aside this use of personal misrepresentation—it is not a gentleman's weapon, and you may therefore be clumsy in the handling of it. I do not mean, as you well know, that I will take reprisal upon your wares; but what I do mean is among the duties of

good Rooseveltian citizenship and will come to you if you will sit and think; and it will come upon you and your abettors untempered by mercy or distinctions. At least some of the schoolmen and women of the State have determined that the selection of texts is a matter to be determined exclusively by schoolmen; and I for one will not permit you to interfere with my discharge of this duty by wilful misrepresentations of my personal integrity, for I have the schools' responsibilities to fulfil while I live, and I have sons to bear my name when I die.

PURPOSE AND ORGANIZATION OF PHYSICS TEACHING IN SECONDARY SCHOOLS *

LEWIS B. AVERY
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IN ADVISING any change in the matter or manner of teaching physics in high schools, or for that matter in advising any educational changes, I am fully aware that the burden of proof rests with those who give the advice. There is no doubt that education must be conservative rather than erratic or sporadic in its mode of progress. But when it is considered that the past few years have seen a greater progressive change in community life, ideals, and knowledge than the world has before known in the same time, it is not to be wondered at that the educational barometer presages unusual disturbances. The period when accomplishments were sought and that when scholarship was made the chief goal, have given place to the era of the specialist in both professional and technical lines. While other aims and purposes may influence the many, yet the flower of to-day's education is the specialist and this fact has determined both curriculum and method. I do not think that we are on the eve of doing away with our experts, discounting scholarship, or showing ourselves unappreciative of real accomplishments, but in the future, as in the past, we will get along with comparatively few experts, scholars, and accomplished people. The old academy expected to educate only the "fit," that term being very exclusive in its application. The public high school has exceeded the fondest hopes of its

* Reprinted from School Science and Mathematics.

projectors. From about two hundred high schools thirty years ago, we have about seven thousand to-day, and in those communities where the high school is most popular it finds itself endeavoring to educate a large proportion of the young people of the community—indeed, is engaged in transmuting the “unfit” into the “fit.” Far from being a school for the select, the high school to-day is becoming peculiarly a school for the masses. Yet its curriculum, and to a large extent its methods, remain those of the preparatory school—a school preparing people to become specialists.

History is to-day arranged and taught largely according to the recommendation of The Committee of Seven. I was privileged a few days since to listen to a discussion of the report of The Committee of Seven by the Pacific Coast Branch of the American History Association. I was not altogether surprised to hear a member of that illustrious Committee and a prominent professor of a large university both agree that history had no place in the secondary schools—even characterizing ancient history in the early years of high school as “cruelty to animals.” A similar opinion is held by prominent university scientists regarding the various sciences in secondary schools. While these views are extreme and would not, I am sure, meet approval with secondary school people, who recognize that it is not the subject nor yet the method, but the teacher that is the prime consideration in secondary education, still I think that the feeling is distinctly growing that the methods of specialists are not well fitted for the education of the masses. It is further evident that while the universities have without question assisted in perfecting the present high school system to an extent that would have been altogether impossible without them, yet, with notable exceptions, they do not and perhaps can not take the high school point of view—that of the education of the masses rather than the preparation of experts.

This is peculiarly a scientific era. Its record of victories over natural forces and its discovery of hidden treasures has put into our hands an Aladdin's lamp. The public, unlettered in science, are fairly superstitious in their devotion to it, and the public press more than reflects this condition of the public mind. But how have our high schools, the people's colleges met this advance of science? I can not forbear calling attention to the interest that prevailed in the physics classes of earlier

years when many a physics master of to-day received his inspiration in what seemed a fairy land of science. The equipment then was meager, the teacher's understanding of the subject scant, the textbooks comparatively inadequate, not to say inaccurate. To-day the scientific laboratories of our high schools would put to shame the college laboratories of those days, our textbooks superbly second the equipment of the laboratories, and the teachers are specialists in the subjects. Combining these facts with the general interest in science, with its wide application in daily life, and with the large amount of popular scientific literature in newspapers, magazines, and books, we might readily expect the interest in that department of high school work to be at its zenith. I need hardly call for testimony. We all know that the science department to-day remains the department for the select and not the masses. The following figures taken from the most recent report of the United States Commissioner of Education are fully in accord with what I have said. During eleven years past the percentage of high school pupils studying astronomy has dwindled from 4.4 per cent to .91 per cent; geology from 4.8 per cent to 2.31 per cent; physiology from 31.9 per cent to 20.36 per cent; chemistry from 8.95 per cent to 6.52 per cent; physics from 22.08 per cent to 15.27 per cent.

The only possible justification for this condition of things is that the secondary school is preparing its pupils for the university in a better way than formerly. I should be perfectly willing to concede this and still believe the argument as wholly without force in the face of the need of the entire community for ordinary scientific education and the enormous expense of maintaining the science departments in the high schools as compared with other departments. But I have had it direct from university teachers of entering students that they practically have to repeat the secondary work in physics anyhow, and hold it but little in respect. I doubt if this opinion is general among teachers of entering students, but, if it is, the argument against present methods is certainly overwhelming and complete. But no such arguments are necessary or desired to make it seem advisable that the sciences, and particularly physics, be given a more popular presentation.

Physics teaching has been conducted with the engineer rather than the boy and girl to be taught in view. The logical method of the subject

has been followed. It has been "from the simple to the complex." From the primary school up, with the sole exception of the sciences, that method of attack has been abandoned. The child of to-day finds "butterfly" just as easy to read as his father did his "a-b-ab" and very much more vital. Even Latin has ceased to require the committing to memory of the entire grammar before reading begins. "From the lever to the steam engine" is the movement of one who is consciously becoming an engineer, but the preparation for that movement should be a study that shall lead from the engine to the lever. The lever can have life and meaning only in the light of the engine. The very fact that boys largely surpass girls in the study of physics is because they have the engine—the whole field of physics—more in mind than have the girls. The elements of physics are to them thus fraught with something of meaning that is lacking in the case of those to whom a lever is a stick and nothing more. If the course in physics can be made vital, it is my opinion it should be made so whether it remains technical or not. The necessities of the community should stand supreme. I am, however, fully convinced that the right presentation of the phenomena of the field of physics will aid rather than hinder in the preparation of pupils for technical courses to be taken thereafter. Who would think of setting the grade stakes for a railroad without a preliminary survey of the route! Pupils who know whither they are tending and feel some interest in results to be obtained and who are in sympathy with the field they are investigating, will accomplish more and better work in the laboratory than those who go through the treadmill of laboratory exercises unilluminated by interest or intelligence regarding the matter in hand. I know that there is a feeling that pupils should not be prejudiced in their experimental work and that there should be no glow of expectation to mar the accuracy of their results—God save the mark!—but as I have had occasion before to observe "The magnificence of the repressed, controlled and directed power of the great scientist is only simulated by the high school student, but in the latter case it is generally nonchalance and patronizing disinterestedness. Self-control and death may have some points in common but their difference is life."

But as for the average pupil who is going into life with no further school education, or who is not to get more physics in college, such knowledge of the field as can be given in a year, or even in a half year,

by a strong teacher with modern equipment, will leave him at least with vital interest in natural phenomena and their explanation—a result far from being obtained to-day even with the picked few of the fourth year pupils in our high schools.

In suggesting such a course I am not entirely without the test of experience. For several years I have prefaced the conventional course in physics with a half year into which have been crowded the most interesting physical phenomena possible. Beginning with light as one of the most interesting portions of the field, we have daily given the best possible exhibition of its phenomena capable of popular explanation, and have made the class hour one of question and answer regarding the experiments of the day, the questions coming largely from the class. No textbook has been used, but the written account of each day has served as a card of admission for the day following. The work has apparently been a source of inspiration to pupils and teacher and those who have taken it have shown a general knowledge of the subject obtained in a half year fairly comparable with that obtained in a year by ordinary methods and have exhibited vastly more interest in it. The conventional course in physics given the year following has been wholly elective and those taking it have accomplished much more in laboratory and text than has ordinarily been done.

As before contended, it seems but reasonable that an acquaintance with the field of phenomena should give a life and zest to later individual experiments that would otherwise seem tedious and unattractive and it will also give some scientific light to that portion of the community now left wholly in the dark in so far as ordinary scientific concepts are concerned.

In conclusion, I advise a strongly presented popular course in physics to be given not later than the third year of the high school course and to be generally required. It should aim to secure in girls as well as boys a vital interest in physical phenomena and their rational interpretation. Such a course may be followed by a purely elective year or more of laboratory physics.

I am further of the opinion that the time approaches when our colleges, instead of insisting that the education that fits for college necessarily fits for community life, will agree that the education that fits for community life necessarily fits for college.

THE TEACHERS' INSTITUTE

AN ADDRESS GIVEN AT THE CONVENTION OF COUNTY AND CITY

SUPERINTENDENTS

FRANK F. BUNKER

City Superintendent of Schools, Berkeley, California

THE Teachers' Institute was born of a need. Sixty years or so ago facilities for academic and professional instruction were meager.

There were but few colleges in the land. There were no high schools. The normal was in swaddling clothes. Common schools were isolated and their sessions intermittent. Salaries were small and their payment not always made in the "coin of the realm." Teaching had not yet become a profession. In consequence young misses and masters, still in their teens, supplemented at a later time by crippled soldiers home from the war, became teachers. There was no opportunity for professional training and little opportunity for the teacher to increase his small store of book information.

That spirit of progress which brought about a free system of education, which established normal schools, which placed a high school in every hamlet, which dignified and ennobled and made a profession of the vocation of the teacher, likewise in this hour of need created the Teachers' Institute. A child born of necessity, it sought to fill the want which made it and at once it set itself to the task of broadening the necessarily meager and inadequate preparation of the teacher. It became a "Normal School with a very short course of study," and this almost wholly concerned with the subject matter of the studies which its attendants taught in their respective schools. As standards of teachers' requirements were raised and certification of some sort required, the institute naturally became the place in which preparation for examination was made. Indeed, at the present time, unless I have been misinformed, there are still some sections in the United States where the yearly sessions of the Teachers' Institute leads directly to an examination for such certification.

Another need in this early period was met by the institute—the need for social intercourse. The population was a scattered one. The schools were largely rural. It was exceptional to find a community with more than one teacher. The trolley, the automobile, the gasoline launch, the telephone, the wireless telegraph, and the aeroplane had scarcely

begun their task of binding into one, hitherto isolated communities. "Boarding 'round," eating with the farm hands and sleeping with the young children of the family were the chief diversions. The Institute brought together a body of people having the same interests, the same problems; who lived the same kind of life and who were inspired for the most part by the same high ideals—and each learned that in the fight against ignorance he stood not alone.

The method employed in these early institutes was the method of the lecturer. Someone with a wider knowledge of the content of school subjects, or with more experience in passing examinations was selected to do the instructing. The auditors sat by with pencil and note-book in hand and took down as much of what the speaker said as they could get. The method was a direct one and one well adapted to the covering of a great deal of ground in a short time.

I have called your attention at this length to the old-time institute to point out three things. First, that it in part met the need for the broadening of academic training; second, that it in part met the need for the opportunity of social intercourse among an isolated people; and third, that the method of the institute was the direct method of the lecturer, but I want most of all to emphasize that it was dominated by a serious purpose—that it was the outgrowth of a real need.

Conditions have changed. Now there is a high school and a well equipped library in every community; magazines and books are available at little cost. The state has provided a splendid system of preparation for the teaching profession and has made it free and accessible to all. There are opportunities for instruction on every hand. No longer is there need for academic preparation in the institute, for better facilities have arisen. The primary need which gave rise to the institute, then, no longer obtains and it is pertinent to ask the question: "Has the institute longer a serious purpose?" "Is it longer needed?"

The suspicion that the present-day institute may be without serious purpose must occur to the observer who steps into an institute audience and sits down among the teachers well toward the rear of the room. With a glance or two he is likely to see several young women working industriously with note-books, ostentatiously open. One might think that they were taking down the serious thoughts of the lecturer to the end that

during the odd moments in a busy life they might ponder the same. This is a mistake for in all probability they are caricaturing the speaker to the accompaniment of side glances and surreptitious giggles. That undertone of sound which he hears is not the reverberation of the speaker's voice as it ricochets from wall and pillar and chair; it is the whispered noise of appointments in the making; of trips newly planned; of neighbors under discussion. That eager expression on the upturned countenances of many of the auditors does not always express a hungering and thirsting after the things which make for educational righteousness; some times it is merely a facial sign which interpreted means a longing for the great, the beautiful, the free out-of-doors. Speak with the teachers individually about their apparent indifference and apathy and they frankly point out to you that the work is but a rehash of the work of a year before; that it is scrappy and disjointed; that the speaker is impractical and theoretical and can not do the things himself which he tells others to do. "We are just being talked at any way, and what's the use," they say. So they whisper and laugh; draw funny pictures, and write letters home and are happy and human and for all the world just like other people in other walks of life under similar circumstances.

To meet this situation there has developed a type of institute worker who is little more than an entertainer. He has learned what is expected of him, and so he goes about with a bag well filled with anecdotes, witty sayings, epigrammatic statements, and well turned stories sometimes bordering on the *risque*. He gets these well in hand, gives them forth with spirit, and sits down generally amid the applause of the audience. One chairman, just before he introduced me to his audience said: "I don't care what you say to them but for heaven's sake make them laugh." The bench, the bar, the pulpit, the lecture platform, the music hall are all drawn upon by the makers of institute programs. If the rating given each participant is in terms of his ability to amuse and entertain then there is good reason for a serious consideration of the questions which I have just put: "Has the institute longer a serious purpose?" "Is it longer needed?"

From our survey of conditions, it is clear that the need originally met by the institute, now no longer obtains, or at least if it obtains it is met in other and better ways. It does not follow, however, that the institute is

thereby without a legitimate place and purpose, for along with a change in conditions may have come new needs and responsibilities and it is not improbable that we shall find that in the mechanism of the institute we have that which will best meet these newer demands.

The period in which we live is a marvelous one. With startling rapidity new discoveries are being made in every department of human thought and activity. Men are more alert than ever before. Our captains of industry are daring things of which our fathers never dreamed. Old theories and beliefs in art, in music, in science, in religion, in education are breaking up. Whether we know it or not, and whether we participate in it or not, a new world is being created. It is a world immeasurably more complex than the world which our fathers knew about. A life lived effectively in it will require vastly more of ability, of resource, and of preparation than did their simple world. It will be one requiring a more careful judgment, a greater sanity, a finer feeling, a more delicate attunement to one's surroundings. It will be a world, too, requiring a broader content of information and a greater skill in adaptation and adjustment all of which assumes a more careful and refined preparation during childhood.

Society has not entrusted to the school alone the heavy responsibility of preparing the young for effective entrance into this world in prospect for she has developed the family, the church, and the state besides, but upon the school she is leaning more heavily than ever before. To the school is presented the task of organizing and assimilating this new content, these new ideas and conceptions, and transmitting the same to the future citizen. To the school is entrusted the task of rendering the individual capable of adjusting and adapting himself easily and readily to the changes in his environment. The school, too, must acquaint the student with the best in the past that he may have poise and balance in the face of new and unsolved problems of the present and of the future. Old subjects and old bodies of knowledge must be reworked in the light of our newer knowledge and newer needs. Our arithmetics, our geographies, our histories, our algebras, our texts in the sciences must all be re-examined and revamped, not from the point of view of the old-time institute attendant, but with the needs of a living, throbbing, splendid, present-day world ever in consciousness.

We need men and women who are fired with this conception to go about among our teachers and point out to them the significance of the wonderful period in which we are living; the splendid opportunities for service which spread out on every hand; and the high place which the school can make for itself in this world-forming work. Normal schools can help, universities may do their share, likewise the pulpit, the press, and the lecture platform, but at best these influences will touch only the individual teacher as he chances in contact therewith. This purpose can best be accomplished only where teachers are congregated as in the institute. It is the institute, too, that the revamping of old bodies of knowledge to meet modern conditions can best be done. And herein, in this two-fold objective, lies the serious work of the modern institute and herein rests a sufficient reason for its continued existence.

The kindling of a fine enthusiasm and a high professional spirit lends itself to the direct method of the lecturer; the process of evaluating both old and new bodies of knowledge requires the indirect one of discussion. The first assumes a speaker who has seen visions and who is capable of swaying his audience with his words. It is suitable to the large assemblage at which the entire teaching body is present. The method of discussion, on the other hand, is adapted only to small numbers grouped according to a common interest; and its natural themes are the specific problems of the respective groups. The modern institute with its general session breaking up into "round table" gatherings has developed the *form* of which I speak, but it lacks the *essence*, for the programs of both are still dominated by the desire to amuse and to entertain. The makers of institute programs have not yet consciously grasped the fact that we are crossing the threshold of a new era in education and that the school is being called out into a larger and nobler field of activity. When the significance of it all comes to be clearly and generally recognized we shall find the Teachers' Institute taking a high place among the instruments whereby the teacher fulfils to the uttermost the possibilities of her high calling.

A PLAN FOR THE AFFILIATION OF THE TEACHERS' ASSOCIATIONS OF CALIFORNIA

Prepared by

DR. E. C. MOORE, E. MORRIS COX, W. M. MACKAY AND
C. L. McLANE

NAME: The name of this organization shall be "The California Council of Education."

MEMBERSHIP: The organizations first considered for membership herein are the California Teachers' Association; The Southern California Teachers' Association; The Northern California Teachers' Association; and The Central California Teachers' Association. After this organization has been duly established, the members thereof shall determine upon the admission of new members.

REPRESENTATION: Each association is entitled to be represented by its president, secretary, and one additional representative for each three hundred paid memberships, or major fraction thereof.

Each president, after the date of the organization of this affiliation of the associations represented herein, shall continue to serve as a representative of his association for two years after his term as president has expired but during these two years he shall be counted as one of the representatives from his association under the apportionment of representatives.

Each association shall determine the method of appointment of its representatives except as above specified.

DUTIES AND PURPOSES: 1. This council shall be a permanent committee on legislation to represent the educational interests of the members of the associations.

2. It shall have authority to establish and support an official means of communication with the members of the associations.

3. It shall have power to deliberate on educational questions, policies and reforms, and to make recommendations regarding the same.

4. It shall have power to take action upon all questions referred to it by the associations.

5. It shall have power to choose its own officials and define their duties.

THE COMING MEETING AT RED BLUFF

W. M. MACKAY

President Teachers' Association of Northern California

THE fourteenth annual session of the Teachers' Association of Northern California will be held in Red Bluff on October 26th, 27th, 28th and 29th. The officers for the present year are as follows: W. M. Mackay, president; G. W. Moore, vice president; Lulu E. White, recording secretary; Delia D. Fish, corresponding secretary; J. D. Sweeney, treasurer. The members of the executive committee are Laverne L. Freeman, May E. Dexter, Lulu E. White, Delia D. Fish, Mrs. M. S. Abrams, S. M. Chaney and W. M. Mackay. All of the county superintendents who are members of the executive committee (with the exception of Miss Dexter, of Yolo county), have called their local institutes to meet in conjunction with the association at Red Bluff. The following counties will, therefore, hold local sessions on Tuesday, October 26th: Shasta, Tehama, Glenn, Sutter, Yuba and Butte. In addition to these six counties, Miss Laugenour, of Colusa, will adjourn her institute on October 27th so that the Colusa county teachers may have an opportunity of attending the association meetings on the last two days.

Certain phases of work will be emphasized in the coming program, such as industrial education, improvement in hygienic conditions, conservation of our natural resources, and affiliation of the teachers' associations of California.

The State Board of Health has promised to have its sanitation car at Red Bluff during the entire session. As a part of the program all teachers will be expected to visit it. It is believed that this feature of the association may eventually prove a great benefit to the pupils of northern California.

On Wednesday morning, after the president's annual address, Dr. Ng Poon Chew will speak on "Modern China." He will be followed by Allison Ware, of the San Francisco State Normal in his lecture, "Our Commonwealth and Its Inheritors."

In the afternoon Dr. C. C. Van Liew, of the Chico Normal, will answer the question: "Is Tom Brown Growing Obsolete?" He will be followed by Mrs. Mary Roberts Coolidge, of Berkeley, who will talk on and give illustrations of "Old English Ballads."

On Thursday afternoon, after the election of officers and the selection of a place of meeting for next year, L. E. Armstrong, editor of the SIERRA EDUCATIONAL NEWS, will talk on "Pulling Together." He will be followed by Superintendent Frank F. Bunker, of Berkeley, on "The Laggard in Our Public Schools." Then Dr. William F. Snow, secretary of the State Board of Health, will give an illustrated lecture on "The City of a Million Wars; or, The Body and Its Battles."

On Thursday evening Hon. Webster Davis, ex-mayor of Omaha, and formerly assistant secretary of the interior under President McKinley, will deliver an address on "Good Citizenship."

On Friday afternoon, Principal J. H. Francis, of the Los Angeles Polytechnic High School will address the association on "The Trend of Modern Education." He will be followed by Richard Gause Boone on "The School Uses of Manual Training."

On Thursday and Friday forenoons there will be sessions of the elementary and high school sections. These sections will be addressed by L. E. Armstrong on "Our Reader Problem in California;" H. W. Fairbanks, "The Relation of Geography to Nature Study;" Frank F. Bunker, "The Elimination of Educational Waste;" Richard Gause Boone, "Literature in the Grades;" J. H. Francis, "Some Unoccupied Territory for the American High School."

In addition to these addresses, there will be discussions by local people, particularly in the high school section on some of the problems now calling for solution in northern California. John F. Engle, of the Placer County High School, will preside at the meetings of the high school section, and Miss Olive Bedford, of Anderson, at those of the elementary section. The programs for the two sections have not yet been fully completed, but will be rounded into shape before the meeting begins. Everything looks favorable for a meeting of genuine educational significance at Red Bluff.

THE WOMAN WITH TWO SKINS

GRACE POTTER
Cayucos, California

"WHY was I not called before?" Without waiting for a reply, the great surgeon went on: "New cuticle must be grafted on this wound at once, Mrs. Davenport, or it will not heal. It should have been done several days ago."

"Dr. Hardin wished to do it; but I would not consent until you had examined the arm, Herr Bergen."

Herr Bergen pursed his lips, and went on probing the arm.

"Burned pretty deep. How—er—did this happen?"

A shudder ran through Christine Davenport. Again there came over her that awful feeling of suffocation. Again she felt the hot flames sweep over her. Again she heard little Marie's screams of terror. Again she felt Philip King's frantic hands crushing out the fire with heavy rugs.

"Private theatricals—Greek fire—flimsy dress—eh, Mrs. Davenport?"

Christine's gray eyes smiled at the doctor's brusque manner.

"Yes, that's the cause; but here's the effect," she cried, touching her burned arm anxiously.

"Once new cuticle is on, it will soon heal. Where am I to get the skin? From your body—?"

"No, no, Herr Doctor, from me, from me!"

It was Mrs. Davenport's black maid, Ninette.

"Capital!" cried the surgeon. "Ninette's in excellent health and a better arrangement could not be made. Push up your sleeve, Ninette."

In a very short time, a bit of Ninette's skin was on the fair, white arm of her mistress.

As days went by Christine's arm healed, and she went about as usual, but never with bare arms.

No one was more popular than the "young widow Davenport," and no ball or fete was complete without her. Her approaching marriage with Philip King gave her an added interest. Christine Davenport had lived most of her life in New Orleans, and all knew her brief history. At sixteen she had been married to a wealthy New York banker. Her married life had been very unhappy, and when her father and husband

were killed in a railroad accident, she was left all alone with her baby, Marie. Now, the prince had come in the person of Philip King, and all her friends hoped to see Christine ideally happy at last.

Preparations for the wedding went on. Jewels were reset; old laces were brought out from chests of bygone days; costly fabrics were fashioned into elegant gowns for every possible occasion.

Through it all, Christine Davenport moved graceful, gracious, her calm eyes seeing and noting all. Yet she was strangely indifferent at times, and seemed content to let the busy workers do as they would with her trousseau. Often times she was sad and preferred to go apart, sitting quietly in some niche of the great house absorbed in thought.

Little Marie noticed this first and chided her mother for being sad. Christine laughed and kissed the delicate face so like her own, bidding the child come for a romp.

Soon others noticed, too, that Christine was changed. She had been all life and gayety; now she was quieter and sad at times. When questioned, Christine laughed, shook her head merrily, declaring she had every reason to be the happiest woman in the world. Yet when she thought herself unobserved, the mask fell and hers was the face of one suffering deeply.

New Orleans was very gay that winter, and one social event came close on the heels of another. Christmas week was unusually full of gaieties. Christine decided to spend Christmas eve quietly with Marie. Her friends clamored, but she was firm. She made Philip King happy, however, by allowing him to spend the evening with them.

A pleasant evening it was too, spent in chatting and singing. Nine o'clock sent Marie for her mother's goodnight kiss.

"This is the best evening we ever had, Mama," Marie said, as her mother bent to kiss her. "And, Philip, I'm glad you came. At first, I didn't want you, but you have been very nice."

"What a quaint child she is!" Philip laughed as Mary went skipping up the stairs.

Christine crossed to the window, threw it open, and leaned out into the night.

Below glimmered the lights of a thousand windows, twinkling through the night—the eyes of the city. From the river came the shrill

whistle of a steamer, entering the jetties. Bustle, chatter, and roystering shouts floated up from the streets below.

"Christine, what has come over you?" Philip King was beside her now. "You are not your old self at all. Once you were all glow and sparkle. Now you are shy as a wood-dove, and I get scarcely a word with you. What is it, dear, that has come over you?"

He pushed back the black hair from her brow, and gazed deep into her gray eyes.

"Phil," she said, her wide eyes looking straight into his, "you and I can be nothing to each other in the future. Good-by only remains to be said."

"But, Christine, I will not be put aside like a child. You are mine."

His arms closed around her, but she pushed him from her.

"I tell you, Phil, we must part. Don't make it so hard for me. It must be so!" in a voice he did not know.

"But, Christine, what is between us?"

"That!"

She flung back the loose sleeve of her dress.

"My God!" Phil King burst out.

The arm from elbow to shoulder was black as ebony.

"It will creep over my whole body," she cried piteously. "The physicians can not stop it—I shall soon be like Ninette. O Phil, it is dreadful to feel it creeping over me day by day, and to know it is closing all joy and happiness out of my life. My God, what have I done that I should be punished like this!"

In his arms she sobbed out the paroxysm of grief. Then, when she was calmer, he kissed her tenderly and went away, promising to come early in the morning to see if help could not be obtained.

Little Marie was asleep as Christine went in, so the hot tears, falling on her dark curls, did not disturb her. Many, many times Christine kissed the sleeper, then stole away to her own room, where faithful Ninette waited for her coming.

Next morning mistress and maid were gone, leaving only a terse note for Philip King. Pinned on her pillow, Christine had left a scrap of paper bearing her last word:

"Keep Marie for me, Philip, and guard my secret."

And Philip King kept the secret. This foster-child Marie has only a hazy memory of the beautiful mother who had been so dear to her childish heart.

Far away in the recesses of a Louisiana swamp, the negroes bless the name of Christine Douglass—a tall, striking-looking woman, with calm, gray eyes, pure, clear-cut features, hair black and satin smooth, and—a skin as black as ebony.

COMMENTS ON THE YOSEMITE CONVENTION NUMBER

I like its concreteness and personal touches. It gives us interest and acquaintance with each other, the interest that is necessary in our profession.—*A Teacher.*

The paper has been a source of enjoyment to me up here in the tall Sierras.—*A Teacher.*

I received my copy yesterday and could not lay it down till I had read it through.—*A Parent.*

The Yosemite Convention number is a pleasure. It is artistic and scholarly.—*A County Superintendent.*

You may publish on the editorial page that it is "Entered at the San Francisco postoffice as second-class matter," but you ought to pay postage on it for first-class matter, for such it is.—*A School Trustee.*

You'll just permit me to remark, "It's a peach!" It's the sort of a number to please old advertisers, to get new ones, to inspire the teachers, and to make our friend tear his hair!—*A City Superintendent.*

The Yosemite Convention number has arrived. Congratulations on getting out a number so interesting and beautiful; it gives the finishing touches to a most enjoyable trip—enabling us to live over again the grandeurs we beheld in the Valley. I could not refrain from expressing my pleasure and appreciation.—*A County Superintendent.*

I wish to congratulate you upon the excellent edition of the SIERRA EDUCATIONAL NEWS issued for the month of September, 1909. This issue with its scenes of the Yosemite should be in every school library in the State of California. Furthermore, it should find a place in every teacher's library.—*A County Superintendent.*

I have read the last number of the NEWS. It is splendid. Aside from its fine literary features, a good deal of good judgment has, I believe, gone into its work. Things have been coming pretty straight from the shoulder, but I find that everyone, like myself, enjoys the freshening of the educational weather.—*One High in Authority.*

Gleanings

ELEMENTARY AND HIGH SCHOOLS

The following letter should prove of general educational interest:

Berkeley, Cal., Oct. 1, 1909.

To the Parents of the School Children of Berkeley:

The Board of Education, in its task of upbuilding the schools of Berkeley, is unanimously committed to the policy of publicity. It believes that back of everything done by the schools there should be a strong sentiment of public opinion based on a knowledge of conditions. It proposes, as far as may be, to take the public into its confidence with respect to what it is attempting to accomplish. To this end the Board from time to time, by means of the children, will distribute pamphlets treating of various phases of school work and written by members of the school corps.

We wish every parent and every adult in Berkeley to read these pamphlets. We wish them discussed, for only through discussion is the truth reached. We wish your criticism—constructive if you can make it such; destructive if you have nothing else to give. If you approve tell us for we are all human. Go into the schools at any time to see what the teachers are doing—you will be welcomed. Write to the Superintendent of Schools—it will take but little time and your suggestion may be just the one needed.

We propose that Berkeley shall have an unexcelled school system. With your strong and enlightened support this high standard can be reached.

Sincerely yours,

FRANK F. BUNKER,
Superintendent of Schools.

The San Jose Board of Education has just purchased another playground adjacent to the Washington Grammar School, and will buy \$3,000 worth of swings, teeter-boards, may-poles, horizontal bars, sand-slides and other athletic apparatus for the equipment of all the grammar school playgrounds.

The May First History Club (so named from the date of organization) held a meeting in San Francisco on September 18th. The paper of the day was a masterly effort by Professor J. N. Bowman of the University of California. His subject was, "Has History a Practical Value?" Superintendent E. Morris Cox of San Rafael after the paper was read called upon the following members to discuss it: Professor Adams of Stanford University, Dr. Richard Gause Boone of the

University of California, Principal Lewis B. Avery of the San Jose High School, Deputy Superintendent T. L. Heaton of San Francisco, Mr. Marshall of the Alameda High School, Principal Johnson of the San Mateo High School, and Professor C. E. Rugh of the University of California. It was the general opinion that while history properly taught has a practical value, that a serious overhauling of texts and methods in history is needed.

San Jose has started a movement for a bond issue or a tag day, or both, for the purchase of a large centrally located playground with a gymnasium.

At a meeting of the Scholia Club at the Bismark Cafe in San Francisco on September 18th a committee comprised of Lewis B. Avery, Ernest Wood and W. T. Helms was appointed to draw up specific recommendations as to the teaching of physics in high schools and present the same at the next regular meeting of the club. D. R. Jones, the factotum, made the following appointments for the year: Program Committee—Ware, Wood and Barker. Membership Committee—Mark, Armstrong and Cox.

At the recent State Fair at Idora Park the regular Manual Training work of the Oakland schools was performed by classes under their regular teachers. For two hours in the afternoon and one and one-half hours in the evening the public was enabled to see just what is being done in Manual Training in the Oakland schools. This educational exhibit and demonstration attracted a great deal of attention and was one of the features of the fair.

At a meeting of the Scholia Club at the Hotel Argonaut in San Francisco on October 16th the speaker of the evening was Professor William C. Morgan of the University of California. His subject was "General Science in the High School," and his address was one of the strongest, sanest talks ever given before the club.

On September 25th the schoolmen of San Francisco had a lunch at the Hotel Argonaut and organized the San Francisco Schoolmen's Saturday Club. Regular meetings and luncheon at 12 m. will be held on the last Saturday of each month. All schoolmen are cordially invited to be present at any meeting. A. J. Cloud of the Lowell High School is factotum, and a standing committee of arrangements and program contains A. J. Cloud, R. D. Faulkner, and F. K. Barthel.

Oakland has established a school savings system. For the benefit of those who might wish to do the same, we append the circular letter issued by Superintendent McClymonds:

To the Patrons of the Public Schools of the City of Oakland, California:

The Board of Education of the City of Oakland last May introduced a savings system for the public schools of the city, the same to go into effect August 9, 1909.

The aim of the school savings system is to develop habits of saving and to foster the spirit of thrift. These habits once established, will form a safeguard against the tendency so common among children to spend money as soon as it is in their possession. Anyone who will note the number of small stores located near the various school buildings; the hucksters with their hand carts who haunt the school grounds at recess time and at the closing of school, will realize that the pupils daily spend many dimes, nickels and pennies.

The savings system in the schools will give the children a knowledge of business methods of banking, and of the rapidity with which money earns money.

The system adopted by the Board of Education will permit of penny deposits. Only small individual deposits are expected. With the co-operation of the parents, the schools, through the savings system, will endeavor to have the children save what they might otherwise spend for worse than useless things. The deposits will be received weekly by the teachers. A folder will be issued to each pupil who desires to become a participant in the savings system. The folder contains space for fifty one-cent savings stamps. The pupil will make his or her deposit with the teacher, who will deal directly with the representative of the bank. The teacher will affix to the pupil's folder one stamp for each one-cent deposit. When the pupil has two full folders, that is, one dollar's worth of stamps, a pass book will be issued to the pupil by the bank, after which deposits of not less than fifty cents may be made directly with the bank. Or the pupil may continue to make his or her deposits through the school savings system.

All deposits entered on the bank pass book will draw interest at the regular rate of bank deposits, the rate now being 4 per cent.

To withdraw the money from the bank, the signature of the parent or guardian will be necessary. The deposits are thus placed under the control of the parent or guardian. Deposits may be withdrawn at any time. The Farmers and Merchants' Bank, located on Broadway, near Twelfth street, has been designated by the Board of Education as the repository for the school savings.

The High School Club of San Francisco was recently organized by more than forty persons representing the various secondary schools of the city, both municipal and endowed.

The purpose of organization, in the words of the constitution, is to advance the interests of secondary education in San Francisco. The expectation is that the club will not only provide a forum for the discussion of questions of the newer secondary field, such as industrial training, articulation, school economy and individual development, school athletics, etc., but also that it may become an organ of the "people's college," for better informing the patrons of the schools, and thus better serving the public interests.

The officers of the club elected for the current year are: Dr. M. E. Blanchard, Mission High School, president; Miss S. A. Hobe, Girls' High School, vice-president, and F. E. Crofts, Lowell High School, secretary.

The club will meet monthly and will also hold an annual session with the High School Section of the California Teachers' Association in December.

On October 8th Berkeley organized an educational club of principals, supervisors, and the superintendent. The club was formed for the discussion of local educational interests. C. L. Biedenbach was elected factotum. The new club numbers about twenty-five, a good working body.

The San Jose Board of Education, in conjunction with the City Library Board, has established a branch library in the Grant Grammar School building. The Board of Education will stand one-half of the expense. A very considerable number of the children in this district are of foreign parentage, and the opening of the library will give them an opportunity to read in the evenings.

The enrollment of the San Jose High School for the year 1909-1910 will exceed 1,200, handled by a corps of 34 teachers.

An epoch-making meeting of the Schoolmasters' Club of California was held in San Francisco on October 9, 1909. The subject for the evening was retirement salaries for teachers. C. L. Biedenbach of Berkeley presided. Professor Alexis F. Lange of the University of California made the principal address. He submitted a draft of a proposed law for the consideration of the club. Addresses in support of the proposition were made by Richard G. Boone, Justice Henry A.

Melvin, and E. Morris Cox. A united, determined effort will be made to secure a state-wide pension law for the teachers of California. State Superintendent Hyatt is now gathering data to submit to the next Legislature showing just how many people would be entitled to allowances under the proposed law.

L. E. Armstrong, secretary of the California Teachers' Association, spoke of the forthcoming "Autobiography of John Swett" and asked for advance subscriptions as a mark of respect and honor to the greatest educator California has produced. The response was remarkable, more than three hundred copies of the book being desired by those present.

M. W. Smith, former principal of the Lompoc High School, has accepted the principalship of the new High School at Princeton.

E. L. Musick has been elected to the principalship of the Weaver-ville Grammar School, vice W. E. Feenaty, who goes to Humboldt county.

J. I. Turley, Stanford University graduate, has accepted the principalship of the Rio Vista Grammar School, vice Frank Bacon, who goes to the principalship of the Pleasanton Grammar School. Mr. Turley will also have charge of the first year's work of the High School at Rio Vista.

Miss Maude Lovering, science teacher in the Bakersfield High School, has been added to the faculty of the San Jose High School.

Miss Fannie Snell, who taught English and History last year in the Susanville High School, has been appointed to the principalship of the new High School at Oroshi, Tulare county. She will have Miss Louise Duncan, Stanford University graduate, as her assistant.

E. B. Wellons, commercial teacher in the Benicia High School, has resigned owing to ill health. His place at Benicia will be taken by J. S. Dauser, University of California, '05, who has just returned from the Philippines.

Miss Orrell McCroskey has just been appointed to a position in the new High School at Big Pine, Inyo county.

W. A. Vivian has resigned his position as head of the history department in the Eureka High School to accept the same department in the Santa Rosa High.

The United States Department of Agriculture is preparing to demonstrate to farmers in a practical way that the one-room ungraded country school can profitably be superseded by the consolidated school, which can be carefully graded and which can have a high school department with manual training and domestic science and agriculture well taught. The assistant secretary of agriculture, Willet M. Hayes, is preparing a large number of moving pictures showing how the plan works in other States, showing the carriages, the trip to school, the big buildings, the classrooms, the manual training, the cooking and sewing classes, etc. These pictures will be shown at various gatherings, and first at the National Corn Exposition at Omaha, Neb., this fall—*School Board Journal*.

UNIVERSITIES OF THE STATE

Following his inauguration as president of Harvard University, Abbott Lawrence Lowell conferred an honorary degree of Doctor of Letters on Professor Henry Morse Stephens of the University of California. Professor Stephens was the delegate of the University of California at the inauguration ceremonies.

The University of Southern California at Los Angeles opens this year with the largest enrollment in its history. The Freshman class in the College of Liberal Arts numbers close to 225, against 160 a year ago. The College of Law will probably reach 300. Much valuable equipment has been installed for the use of the science departments. An important and far-reaching movement was recently consummated when the Los Angeles Colleges of Physicians and Surgeons was consolidated with and became an integral part of the University. Dr. Charles W. Bryson is Dean. This completes a group of nine colleges, including Liberal Arts, Law, Dentistry, Music, Oratory, Fine Arts, Pharmacy, Theology, and Medicine, and adds cogency to the claim of the University of Southern California to being a real university.

In the faculty of the College of Liberal Arts a number of faces are seen for the first time this year. Professor Charles W. Lawrence, C. E., becomes head of the rapidly expanding department of Civil Engineering; Mr. Lawrence adds to his training in University of Pennsylvania seven years of practical engineering experience. Mr. J. G. Van Zandt, B. S., is added to the department as associate professor. J. C. Gaylord, E. E. (Mass. Inst. Tech.), is Instructor in Electrical Engineering. Professor William Odell Shepard, A. M. (Chicago), is the new associate professor in the English department; in the same department, Miss Zula

Brown, A. M (U. C.), becomes an instructor. Dr. James Main Dixon remains head of the English department, and confines his attention to advanced students. Thomas B. Stowell, Ph. D., L. L. D., for many years well known as president of the Potsdam Normal School, New York, is now head of the new Department of Education. This appointment leaves Dr. James Harmon Hoose free to devote his energies to the Department of Philosophy. Leslie F. Gay, the Lottie Lane prize scholar for 1909, becomes an instructor in the Preparatory School. A most prosperous year has opened for the University of Southern California.

Dr. Irving Stringham, professor of mathematics at the University of California, passed away on October 5th. At the time of his death Professor Stringham was acting head of the University, in the absence of President Wheeler at Berlin. Professor Stringham was prominent among the progressives at the University. He did much to break down the hard and fast traditional standards of entrance requirements. His work contributed largely to a better articulation of our high schools with the University. Dr. Stringham was a successful writer of texts, his work on algebra being widely used.

Dr. Alexis F. Lange, head of the department of education, becomes acting head of the University through Professor Stringham's death. Professor Lange and Professor Stringham were closely associated and were warm personal friends. Professor Lange is especially dear to the school people of the state through his sympathetic understanding of their problems. And there is no man more deservedly popular with the student body at the University than is Professor Lange.

It now appears that the Otis law making the president of the Alumni Association of the University of California ex-officio a member of the Board of Regents of that institution is unconstitutional, and that James K. Moffitt, the president of the Alumni Association, will not be able to take his seat. The organic act establishing the University was incorporated as a part of the Constitution of the State, and so can not be changed except through the regular procedure of a constitutional amendment. Moffitt himself holds the new act to be unconstitutional on the ground here stated.

Professor W. Hohfeld, associate professor of the Law Department of Stanford University, has accepted an invitation to lecture at the Chicago Law School. He will give two lecture courses, one on the "Law of Evidence," and the other on "The Principles of Equity."

STATE NORMAL SCHOOLS

The San Diego Normal School has received a gold medal from the officers of the Seattle Exposition for their educational exhibits. It naturally pleases this young normal school to receive the highest distinction among the normal schools of this state.

The purpose of the local exhibit was to show types of representative daily work and the various features of school life as it is in the San Diego Normal School. This was done by means of actual specimens of work or by photographs. Although the work was prepared with considerable care, it consists entirely of the usual work turned out by the pupils and could be duplicated at almost any time. This fact, it is claimed, reflects all the more credit to the San Diego Normal School and shows what a high standard it has reached.

The letter announcing the award of the gold medal was forwarded to the school in the early part of the week by Superintendent Robert Furlong of the California Educational Exhibit. It reads:

"I am pleased to announce that a gold medal was awarded to the State Normal School of San Diego for its educational exhibit. This gives to the San Diego Normal School a higher distinction than was given to the other normal schools of the state."

The new building at San Jose is progressing finely, the first story having been practically completed. A short time ago the students—some seven hundred in number—made an official inspection of the building and improved the work as far as completed.

COUNTY INSTITUTES

The San Benito County Institute was held at Hollister on October 18th to 20th. Superintendent Garner had called his institute in the beautiful new County High School building. This building of twelve rooms is a model in every way, and is easily one of the finest and most beautiful in the state. We shall run a cut of it a little later on and tell how it came about. The special instructors at the institute were: State Superintendent Hyatt, Miss Agnes E. Howe of the San Jose Normal School, D. R. Jones of the San Francisco Normal School, L. E. Armstrong of the Sierra Educational News, Professor Lee Emerson Bassett of Stanford University, and Professor Leonard Day of the University of California.

The Santa Cruz County Institute was held in Watsonville from October 12th to 14th inclusive. In opening the institute, Superintendent C. W. Price made an admirable statement of the general purpose of education, a statement so filled with thought and inspiration that we shall publish it a little later on. L. E. Armstrong of the Sierra Educational News gave three addresses on the teaching of literature and one on the plans and purposes of the California Teachers' Association. J. W. Linscott, city superintendent of Santa Cruz, made a splendid address. One feature of this very pleasant institute was the teaching of several songs to the institute by Mr. Misner of the Watsonville schools.

Superintendent Durke of San Luis Obispo county had his institute from October 5th to 7th. A very profitable session was held. The special instructors were: Superintendent Mark Keppel and Job Wood, Jr., of the state office.

Superintendent White of Solano county and Superintendent Jackson of Napa county held a joint institute at Napa from October 18th to 20th. The special instructors were: Richard G. Boone, L. E. Armstrong, Hon. Frank J. Murasky, Lee Emerson Bassett, and Ng Poon Chew.

The Placer County Institute was held in Auburn for five days, beginning October 11th. Superintendent Chas. N. Shane had arranged a good program. His special instructors were Superintendent J. W. McClymonds, Miss Effie B. McFadden, L. E. Armstrong, Dr. W. F. Snow, and Mrs. Mary Roberts Coolidge.

Superintendent Belle S. Gribi held the Merced County Institute at Los Banos the week beginning October 18th. We did not receive a list of the special instructors.

The Santa Barbara County Institute was held from October 18th to 22d. Miss Lehner, the county superintendent, had as instructors Richard G. Boone and L. E. Armstrong.

Superintendent S. B. Wilson called the Eldorado County Institute at Placerville for the week beginning October 18th. A good time was reported.

Our Book Shelf

BAILEY & GERMANN'S NUMBER PRIMER. By M. A. Bailey, A.M., Head of the Department of Mathematics, New York Training School for Teachers, and George B. Germann, Ph.D., Principal of Public School No. 130, Brooklyn. Cloth, 12mo, illustrated, 176 pages. Price, 30 cents. American Book Company, New York; San Francisco, 565 Market street.

This book for the first year and a half of school is to be placed in the pupils' hands beginning with the second week. It is not a teacher's book, but teaches directly to the scholar the forty-five addition combinations, and their related subtraction combinations. It does this intensively, foreshadowing multiplication and division by means of counting exercises. The book supplements and aids the teacher's oral development of the subject, and supplies material hitherto furnished only by the teacher. It teaches through visualization, without the use of troublesome number charts and time-consuming blackboard work. Each exercise has a definite aim, clearly stated in the title, conducive to ease in teaching and ease in learning. Graphic illustrations are employed as stepping-stones from the known to the unknown. The vocabulary includes 376 words in all, and is so carefully graded that it is always within the grasp of the child's reading powers.

GULICK'S EMERGENCIES. By Charlotte Vetter Gulick. Edited by Luther Halsey Gulick, Director of Physical Training in the Public Schools of New York. Cloth, 173 pages. Price, 40 cents. Ginn & Company, New York; San Francisco, 717 Market street.

This is the second book of the Gulick Hygiene Series. As its name suggests, this volume presents the subject of emergencies from the child's point of view, describing not only the emergencies which occur to children, but the ways in which the children themselves should meet them. Information about the proper methods of dealing with cuts, sprains, broken bones, burns, bandages, street accidents, fainting, drowning, frost bites, poisons, dog bites, etc., enables the child to treat with a very sufficient degree of skill the common mishaps that befall him in his work or play.

Special attention is given to the causes of accidents and their prevention. Discussions of fireworks, firearms, electricity, poisonous plants, knives, scissors, and the like, help the little reader, through a practical knowledge of these things with their attendant dangers, to use them when necessary without harm to himself or others.

ADAMS'S NEW PHYSICAL LABORATORY MANUAL. By Charles F. Adams, Head of the Department of Physics, Detroit High School. Cloth, 12mo, 192 pages, with illustrations. Price, 60 cents. American Book Company, New York; San Francisco, 565 Market street.

This new book embodies the results of twelve years' experience in conducting laboratory work in physics. The 78 exercises are all simple, and the directions for manipulation clear. The College Entrance Requirements and the New York State Syllabus are fully covered, and there is enough additional matter to enable any teacher to make out a course of work adapted to his particular needs. The Appendix contains general directions for the use of apparatus, and twenty tables of formulas and physical constants.

WATERMAN'S PRACTICAL AIDS TO THE TEACHING OF CIVICS. By S. D. Waterman, Former Superintendent of Schools, Berkeley, California. Cloth, 169 pages. Price, 60 cents. Whitaker & Ray-Wiggin Company, San Francisco.

In this book we find a clear and accurate treatment of city, state and nation. The author handles skilfully a number of subjects now attracting public attention, such as the direct primary, the recall, and the initiative and referendum. It is a timely book and will prove helpful to teachers of civics everywhere, but especially so in California.

DUMAS'S LE COMTE DE MONTE CRISTO. Edited by C. Fontaine, B. es L., L. en D., Chairman of French Department, High School of Commerce, New York. Cloth, 16mo, 208 pages, with notes and vocabulary. Price, 40 cents. American Book Company, New York; San Francisco, 565 Market street.

In order to avoid the excessive length of Dumas's famous romance in the original form, this edition gives in an English resume the plot of the introductory portion of the story, leading up to the imprisonment of Dantes, and omits the latter portion, dealing with his vengeance, as unsuited to class reading. The text so constituted therefore gives complete the main story—the dramatic episodes of the Chateau d'If, the escape, and the discovery of the treasure. The notes are ample, but concise, and the vocabulary is complete for all matters of translation and usage.

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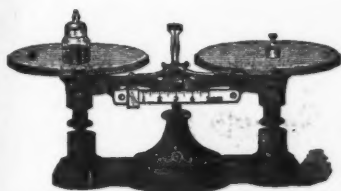
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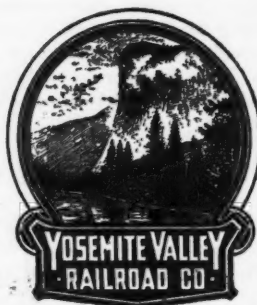
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